

4 RF 00110

EG&G ROCKY FLATS



000021068

DIST.	TR	ENC
ARAL, M.E.		
NEDETTI, R.L.		
NJAMIN, A.		
RMAN, H.S.		
ANCH, D.B.		
RNIVAL, G.J.		
PP, R.D.		
VIS, J.G.		
RHERA, D.W.		
NNI, B.J.		
RMAN, L. K.		
ALY, T.J.		
DAHL, T.		
BIG, J.G.		
IBY, W.A.		
ESTER, A.W.		
NN, H.P.		
RX, G.E.		
DONALD, M.M.		
KENNA, F.G.		
INTROSE, J.K.		
ORGAN, R.V.		
OTTER, G.L.		
ZUTO, V.M.		
EY, J.H.		
SING, T.L.		
NOLIN, N.B.		
TLOCK, G.H.		
EWART, D.L.		
LLIVAN, M.T.		
VANSON, E.R.		
LKINSON, R.B.		
LLIAMS, S. (ORC)		
LSON, J. M.		
VANT, R.B.		
W. Boyle	X	
E. Fickling	X	
J. Fickling	X	
J. Fickling	X	
L. Fickling	X	
H. Peters	X	
R. R. (2)	X	
File (2)	X	
ORRES CONTROL	x	x
MIN RECORD		
TS/T130G		
AFIC		

EG&G ROCKY FLATS, INC.

OCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

January 3, 1994

94-RF-00110

F. R. Lockhart
Director
Environmental Restoration Division
DOE, RFO

MANAGEMENT OF PRECIPITATION AND WINDBLOWN SOIL IN EMPTY SOLAR PONDS -
SRK-001-94

We have informed your staff informally that precipitation water collected in empty solar ponds will be managed as non-hazardous waste. This letter documents that decision and, in the attachment, the logic used to determine that precipitation water collected in empty Solar Ponds impoundments is not hazardous waste for the purposes of RCRA. Based on this logic and an informal acceptance from the Operable Unit 4 CDH representative, EG&G has been managing precipitation water in the empty impoundments as non-hazardous waste. Since we needed to add water to Pond 207-C to maintain an appropriate wet cover on the salts, the precipitation water has been added to Pond C.

Water from future precipitation events may not be needed for Pond C, and certainly will not be needed after the pond is emptied in March, 1994. Water could be discharged to the Walnut Creek drainage, removed and treated in Building 374, or left to evaporate naturally. The least expensive option which meets all requirements is to leave the water in the ponds to evaporate naturally. If water is present when personnel need access to the ponds to complete the OU 4 remedial investigation, that water will be managed with input from the EG&G Environmental Protection organization. The most likely scenario would involve transferring water to an impoundment that has already been characterized. When we are ready to begin closure construction, any water can be removed and either treated or discharged as required to compliment the protection of surface water quality.

Windblown soil is also likely to enter the empty ponds. A hazardous waste determination is also provided for this material which is analogous to the precipitation determination.

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If you would like to discuss this information further, please contact Ray Boyle, extension 6926, or Kathy London, extension 8585.

A handwritten signature in cursive script, appearing to read "S. R. Keith".

S. R. Keith
Program Director
Solar Pond Projects
EG&G Rocky Flats, Inc.

KCL:clh

S. Howard	-	DOE, RFO
P. Witherill	-	DOE, RFO

Precipitation will collect in empty Solar Ponds impoundments. What is the status of the resulting water?

Question: Is precipitation a solid waste?

Answer: Precipitation is not a solid waste:

- Is precipitation abandoned material?

No; not "thrown away", not burned, not being accumulated in lieu of being abandoned.

- Is precipitation recycled material?

No; not spent material, not sludge, not a by-product, not a commercial product, not scrap.

- Is precipitation inherently waste-like?

No; not related to dioxins or furnace operations.

Question: Does the precipitation contain any waste?

Answer: Precipitation collected in an empty Solar Pond impoundment does not contain waste:

The precipitation in question collects naturally in the ponds via run-off from the berms and liners of the impoundments. Sub-questions can be evaluated: What do we know about "empty" impoundments? Is any waste present that could become contained in the precipitation?

A *container* is empty if all wastes that can be removed have been removed using practices commonly employed for removing material from the container; and no more than one inch of residue remains or not more than 0.3 wt% of the container (greater than 110 gallons in size) capacity remains (§261.7(b)(1)). Any waste remaining is not subject to regulation under RCRA Parts 261-265, 268; 270, and 124 (§261.7(a)(1)).

A *tank* is empty when its contents have been drained to the fullest extent possible... it is not expected that 100% of the wastes will always be removed... a tank should be considered empty when the generator has left the tank's drainage system open until a steady, continuous flow has ceased. (47 FR 1250).

What about a surface impoundment? No direct guidance found; extrapolate the logic:

When a pond is emptied, all the wastes (water and sludge) are removed using the common practices at the plant, and we have gone beyond that removal to "clean" the empty impoundments. The liners have been washed, the liners have been smeared to confirm the radioisotope level is very low, the air monitoring stations around the ponds

record no evidence of radionuclides level varying between empty and full ponds. The

liners themselves may be solid waste when discarded, but the liners are not mobilized in water/precipitation. This evidence supports a conclusion that there is no waste available to be mobilized by precipitation.

The precipitation is not coming into contact with any waste that is mobile. The only "waste" it might contact is the liner, but the liner is still in-use until the ponds are closed, so the liner is not yet waste.

A puddle of precipitation water that collected in the A-Pond was sampled (October 10, 1993) and analyzed for metals. The concentration of metals (see table) was far below the characteristic levels established in the regulations and far below the Constituent Concentrations in Waste, waste-waters levels (with the exception of lead, where both the CCW level and the value measured are below the instrument detection limit; the ICPEs method used may not provide adequate sensitivity for arsenic, lead, selenium, or thallium). Where no standard exists, "NA" is entered.

The OU 4 CDH representative was contacted informally regarding the precipitation water. He saw no problem with EG&G managing the water as a non-RCRA hazardous waste.

Question: Are there any other issues of interest in discharging the collected precipitation?

Answer: Surface Water Division has an interest in any water discharged to the Sewage Treatment Plant or to the Walnut Creek drainage.

As shown in the table, the precipitation water exceeds several stream standards for the Walnut Creek. While these levels do not preclude movement of a relatively small amount of precipitation water into Walnut Creek, alternate management options may be more attractive. In particular, allowing the water to evaporate naturally may be effective if no other problems are created by the water's presence.

It may be necessary to move precipitation water out of a pond that requires personnel access for environmental characterization or closure. At the time the need is identified, the most effective protocol may be to contact the Surface Water Division for support in sampling and dispositioning the water. A one-time pump-and-treat would be an alternative to sending the water to the Walnut Creek drainage.

Since the precipitation water is not a hazardous waste, an impoundment that contains only precipitation water will be referred to as "empty".

Table: Analysis of Precipitation Water in Pond 207-A

Analyte	Concent'n µg/l	Qualifier Code	Toxicity Character. µg/l	CCW §268.43 µg/l	Stream Standard µg/l
Aluminum	463		NA	NA	87
Antimony	24	U	NA	NA	14
Arsenic	94	U	5000	NA	50
Barium	23	B	100,000	NA	1000
Beryllium	5.6		NA	NA	4
Cadmium	95		1000	1600	1.5
Calcium	6040		NA	NA	NA
Chromium	11	M	5000	320	50 (III) 11 (IV)
Cobalt	4	U	NA	NA	NA
Copper	47		NA	NA	23
Iron	288		NA	NA	300
Lead	67	U	5000	40	28
Magnesium	715	B	NA	NA	NA
Manganese	35		NA	NA	560
Molybd'm	6.8	B	NA	NA	NA
Nickle	18	B	NA	440	125
Potassium	1270	B	NA	NA	NA
Selenium	47	U	1000	NA	10
Silver	7	U	5000	NA	0.59
Sodium	2180	B	NA	NA	NA
Strontium	29	B	NA	NA	NA
Thallium	113	U	NA	NA	0.012
Vanadium	7	U	NA	NA	NA
Zinc	116		NA	NA	350

Qualifier Codes: U Below instrument detection limit
B Between instrument and contract detection limit
M Poor agreement seen between the instrument readings averaged
to provide the value shown

Windblown soil will collect in empty Solar Ponds impoundments. What is the status of the resulting material?

Question: Is the soil a solid waste?

Answer: Soil is not a solid waste:

- Is soil abandoned material?

No; not "thrown away", not burned, not being accumulated in lieu of being abandoned.

- Is soil recycled material?

No; not spent material, not sludge, not a by-product, not a commercial product, not scrap.

- Is soil inherently waste-like?

No; not related to dioxins or furnace operations.

Question: Does the soil contain any waste?

Answer: Soil collected in an empty Solar Pond impoundment does not contain waste, using the same logic applied to precipitation water. (There is no accumulated soil in the empty ponds at this time, so no sampling is possible.)

Question: Are there any other issues of interest regarding soils blown into the ponds?

Answer: No issues have been identified.

The ponds closure structure is under design, and any soils blown into the ponds (only small amounts would be expected to accumulate since pond closure will begin in September, 1995) are likely to be incorporated into the closure without added design requirements or expense.